Section 4. Indiana I-Team Framework Inventory—Abstracts

Cadastral Information

1. Theme Description and Priority: Cadastral information describes past, current, and evident future rights and interests in real property (as defined in 50 IAC 2.2-1-50). These interests are commonly represented graphically as vector data. Attribute data may be associated with the vector data to provide more information about the interest holder and/or the nature of the interest held. Examples of cadastral information include survey drawings, legal descriptions, mineral leases, and property tax assessment data. Because cadastral information is often dependent on a geographic reference system, such as the Public Lands Survey System (PLSS), these reference systems may also be considered as cadastral framework data.

2. Background and Purpose: In accord with the Federal Geographic Data Committee (FGDC), cadastral data will be considered a framework data category by the Indiana I-Team. The cadastral framework data will consist of the contributions of individual participants, with initial emphasis on delineation of the PLSS and the location of publicly owned or administered land. It is anticipated that the cadastral framework data will serve the following purposes:
- a source of data providing comprehensive land information at the parcel level for use in other applications
- a base for the association of related data
- a reference framework for the compilation, registration, analysis, and display of other data

3. General Status of Data and Data Sources:

	Dataset	Source	Status
Federal	PLSS	Purdue University CAAGIS	Complete
	PLSS	Indiana Geological Survey	In-progress
	National Parks/Forest Boundaries	Department of the Interior / US Forest Service	Complete
	Interstate/US Hwy Rights of Way	USDOT	
	?	Bureau of Land Management	
Tribal	Tribal Land Boundaries	Miami Reserve?	
State	State Parks/Forest Boundaries	IDNR	Complete
	State Road Rights of Way	INDOT	In-progress
	?	NRCS	
County	County Park Boundaries	County Auditors	
	County Road Rights of Way	County Highway Departments	
	Airport Boundaries	County Auditors	
	Cemeteries	Township Trustees	
	Utility Property Boundaries	Utilities/County Auditors	
	Private Property Ownership	County Auditors	
	PLSS Section Corners	County Surveyors	
Municipal	Municipal Park Boundaries	County Auditors/Municipal Records	

	Street Rights of Way	County Auditors/Municipal Records	
	Utility Property Boundaries	County Auditors/Municipal Records/Utilities	
Private	Property Surveys	Land Surveyors/County Recorders	Unknown

4. Strategy

Since most of the cadastral data seems to be maintained on a county level, it would be most effective to focus our efforts on these agencies. Some of the counties that have implemented, or are planning to implement GIS are Marion, Hancock, Tipton, DeKalb, Vanderburg, Elkhart, St. Joseph, Marshall, Kosciusko, Hamilton, Tippecanoe, Newton, White, Miami, Henry, Hendricks, Madison, Vigo, Delaware, and Monroe. A number of municipalities have implemented, or are planning to implement GIS

These counties should be encouraged to create metadata and contribute it to the Indiana Geographic Information Catalog and future data clearinghouse. IGIC member organizations such as the Association of Indiana Counties, Indiana Association of Cities and Towns, and County Surveyors Association should be encouraged to promote the submission of metadata among their members as well. Once the metadata is received, the individual cadastral datasets can be evaluated for inclusion in the framework.

It is anticipated that maintenance of the data will remain the responsibility of the contributing agencies. The frequency of this maintenance will depend largely on the volatility of the data.

Geodetic Control

Theme Description:
Geodetic control is the common basis for referencing other features to the earth's surface relying on nationally used horizontal and vertical coordinate datum. Geodetic data provide the base of reference for latitude, longitude, height, scale, orientation, and gravity measurements used throughout the United States. The National Research Council recognized the importance of this layer when it published the "Need For A Multipurpose Cadastre" in 1980. It reported that "A survey control base is needed to create an integrated land records and information system. Monumented points whose coordinates have been determined with respect to the national geodetic control system constitutes such a system. This system permits spatial reference of all land data to identifiable points on the earth's surface".

Background and Purpose:
The National Geodetic Survey (NGS) serves as the Nation's repository for geodetic data. The NGS distributes geodetic data worldwide to a variety of users. These geodetic data include the final results of geodetic surveys, software programs to format, compute, verify, and adjust original survey observations or to convert values from one geodetic datum to another, and publications that describe how to obtain and use Geodetic Data products and services.

NGS, known by other agency names in the past, has been responsible for establishing and maintaining a nation-wide geodetic control network since 1807. This network, currently called the National Spatial Reference System (NSRS), contains monumented survey stations whose horizontal and/or vertical coordinates are precisely known. In the past, NGS was the only agency establishing, maintaining, and publishing high accuracy geodetic control. Due to the nature of the surveying technologies most horizontal control was on mountain peaks, and vertical control followed roads and railroads. The US Geological Survey (USGS), would use the NGS control and survey down to the area of interest using lower accuracy procedures and instruments, but adequate to support USGS mapping efforts. Therefore, many geodetic survey stations established 30 or more years ago are considered inaccessible by today's surveyors or inappropriate for using GPS technology. The control network continues to diminish in size as stations are destroyed due to construction and vandalism**.**

The map at the end of this section depicts the Indiana High Accuracy Reference Network (HARN). HARN consists of 148 stations in all 92 counties. The NGS has designated 17 of the Indiana HARN stations as Federal Base Network (FBN) stations. These stations will be critical in the readjustment of the National Spatial Reference System (NSRS) by the NGS. These stations are critical to the spatial development of Indiana; from utilities to highways, Geographic Information Systems (GIS) to Precision Farming.

General Status of Data and Data Sources:
In the past, Federal survey networks were conducted at the Federal level. The Indiana HARN was completed as a cooperative effort with the Federal, State, Local, Indiana Society of

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Professional Land Surveyors (ISPLS), Public and Private Companies. The HARN was truly a successful joint effort. Funding from various groups and in-kind services and equipment were used to complete the project.

The budget required for State, Local, Public and Private projects would be dependent on the type of survey projects, the quality and timeliness of the project. Data sources are listed below. The status of the different geodetic controls varies. Refer to individual datasheets for the status and source of the geodetic points.

Strategy:
Each type of Geodetic Control contains a reference system of monumented points (ex: HARN points) and/or GPS control stations. Each geodetic point within a particle type of control system would have a datasheet describing the type of point and the metadata about the point.

Most geodetic control quality is primarily driven by the Federal Geodetic Control monumented points and control stations. Most surveyors use a Federal location as a control point to begin a survey and then the project survey is completed per project. The Indiana High Accuracy Reference Network will provide at least one Federal-known high-accuracy point in each of Indiana's 92 counties.

List of Organizational/Individual Geodetic Contacts:
Contacts for Federal Geodetic Control
U.S. Geological Survey
National Oceanic and Atmospheric Administration (NOAA)
- Typical Station
- CORS Station
- Earthquake Area
- Tidal Bench Mark
- POSTED Bench Mark
- N-Height Bench Mark
- U-Height Bench Mark
- Vertcon Height Bench Mark
- GPS Mark
- Precise GPS Mark
- Readjusted Bench Mark
- FBN
- CBN
- HARN
- SPECIAL STATUS
- PACS
- SACS

Contacts for Indiana State Geodetic Control

Indiana uses many of the Federal Geodetic Control Points
Department of Natural Resources –   Bob Wilkins
Department of Transportation –   Henry
Department of Environmental Management (Landfills) - Tom Daughtery
Indiana Society of Professional Land Surveyors - Dan Pusey
State Geodetic Advisor - Dr. VanGuilder (Purdue University)
Indiana University

Contacts for Local Geodetic Control
County Surveyors (each county has a County Surveyor)
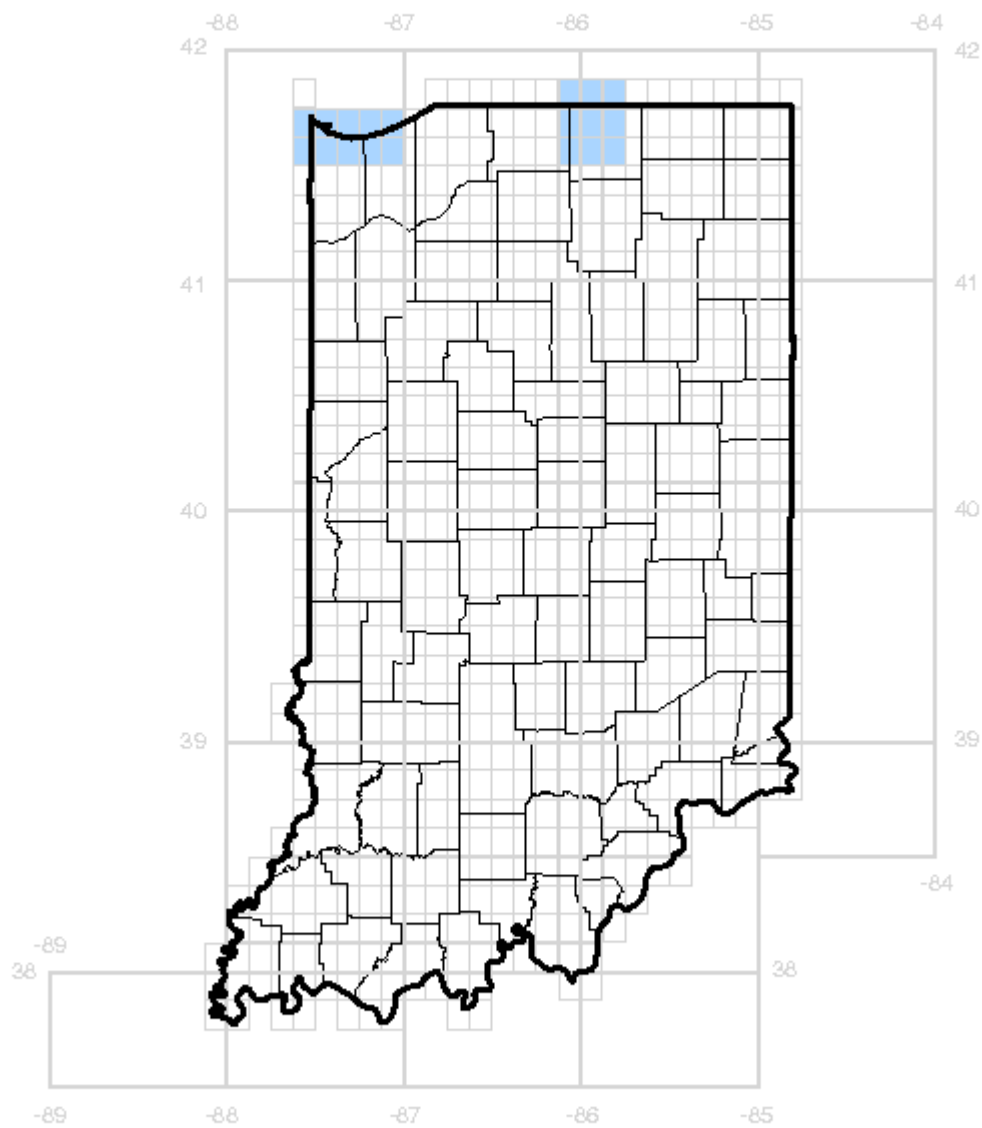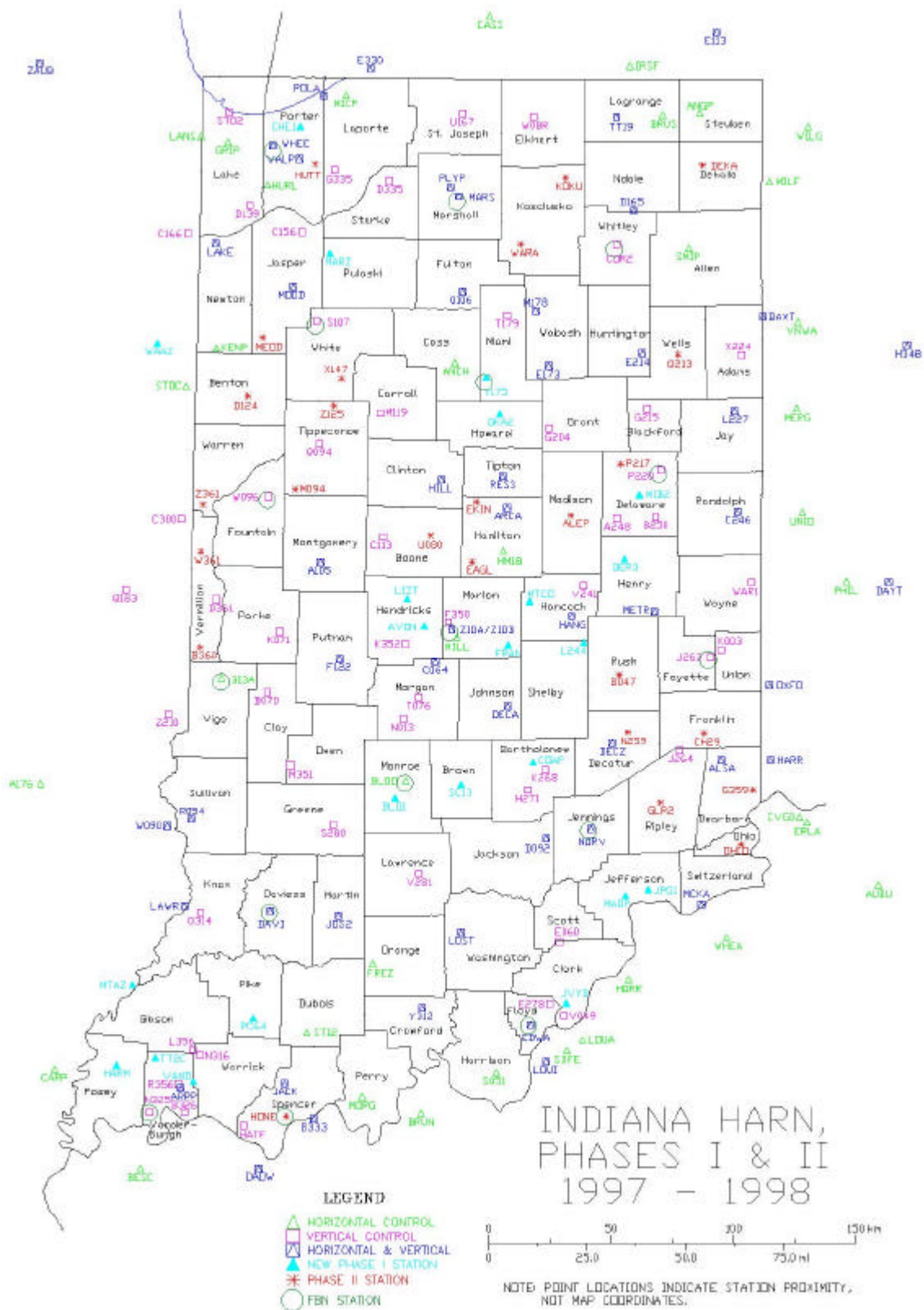Public and Private Survey Companies

Digital Line Graph (DLG) Availability
7.5 Minute Survey Control Overlay

Data current as of 7/31/2001

☐ CONTROL AVAILABLE FOR SALE
☐ CONTROL IN PROGRESS

INDIANA HARN,
PHASES I & II
1997 – 1998

LEGEND
△ HORIZONTAL CONTROL
▽ VERTICAL CONTROL
▣ HORIZONTAL & VERTICAL
▲ NEW PHASE I STATION
✳ PHASE II STATION
◯ FBN STATION

NOTE: POINT LOCATIONS INDICATE STATION PROXIMITY,
NOT MAP COORDINATES.

0   50   100   150 km
0   25.0   50.0   75.0 mi

Digital Ortho-Imagery

Theme Description:
A digital orthophoto quadrangle (DOQ) is a computer-generated image of an aerial photograph in which displacements caused by camera orientation and terrain have been removed. These products combine the image characteristics of a photograph with the geometric qualities of a map and can be used in numerous geographic information system (GIS) applications either alone or in combination with other digital data, such as Digital Line Graphs (DLG) or Digital Raster Graphics (DRG). 1

Unlike a standard aerial photograph, relief displacement in orthophotos has been removed so that ground features are displayed in their true ground position. This allows for the direct measurement of distance, areas, angles, and positions. Also, an orthophoto displays features that may be omitted or generalized on maps.

Example DOQQ image from Richmond, IN.

Status:
Once-over DOQQ coverage for the State of Indiana was completed in 1998-1999 (refer to status map at the end of this section depicting dates of coverage). Images obtained in 1992, 1993, 1994,

1 http://mapping.usgs.gov/www/ndop/

1995, and 1997 are also available for selected areas of Indiana.

Data Sources:
The National Aerial Photography Program (NAPP) imagery and NAPP-like photography are the primary sources of aerial photography used in the production of 1-meter digital orthophotos for the National Digital Orthophoto Program (NDOP). NAPP photography is quarter-quadrangle centered (3.75-minutes of latitude by 3.75-minutes of longitude in geographic extent) and taken at an aircraft altitude of approximately 20,000 feet above mean terrain using a 152-millimeter focal-length camera. The scale of the NAPP photography is approximately 1:40,000. Orthophoto quadrangles may also be produced through the mosaicking of digital orthophoto quarter-quadrangles. Color infrared (CIR) photography may be used as a source. However, the resulting DOQ may either be a single black-and-white composite of all bands or a color DOQ with all three bands. Although NAPP is the primary image source, this does not prevent the use of additional aerial photographs or digital images in the future.[2]

Standards:
Digital orthophoto standards are described at the following website:
	http://rockyweb.cr.usgs.gov/nmpstds/doqstds.html

Priority:

Estimate total investments in this theme:
The United States Geological Survey, Natural Resources Conservation Service, and Farm Services Agency spent $2,500,000 for the 1998-1999 coverage for Indiana.

Most appropriate data steward:
The primary archive and distribution point for orthoimagery data produced by the USGS is located at the EROS Data Center (EDC) in Sioux Falls, South Dakota. The general public can order DOQ files from the USGS Sales Data Base or online through the Earth Explorer at http://earthexplorer.usgs.gov or by contacting any Earth Science Information Center (ESIC). Orders can be placed by phone by calling 1-888-ASK-USGS.

Indiana University's massive data system is a secondary repository of the imagery. All images are available to the public via the Internet at http://storage.iu.edu/DOQQS/
The data are also available in a MrSID compressed format.

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2 http://edcwww.cr.usgs.gov/Webglis/glisbin/guide.pl/glis/hyper/guide/usgs_doq

Digital Orthophotography

Image Year
- 99
- 98
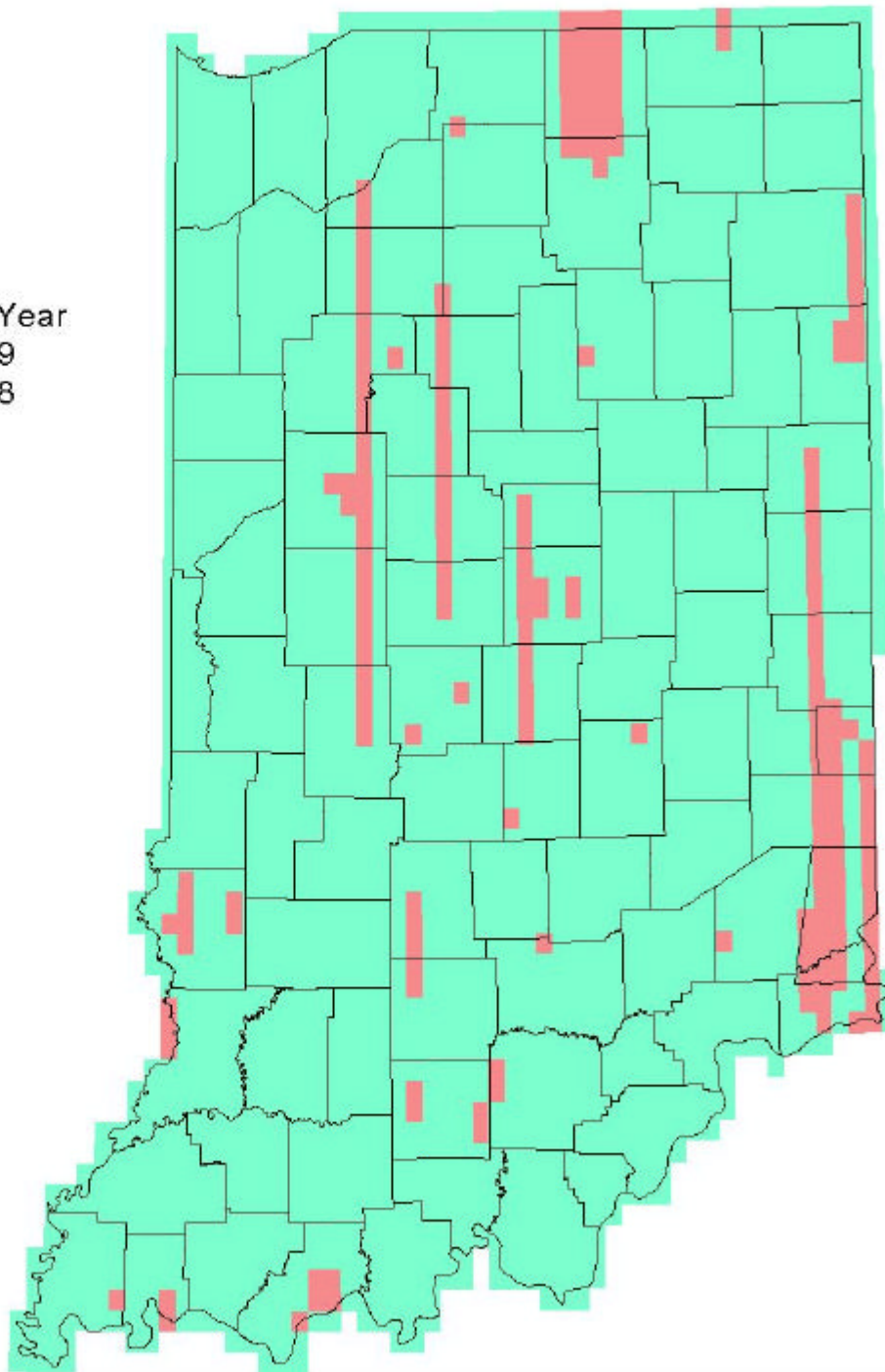
Elevation

Theme Description:
The FGDC "Framework Introduction and Guide" explains "elevation as data to provide information about terrain. Elevation refers to a spatially referenced vertical position above or below a datum surface. The framework includes the elevations of land surfaces and the depths below water surfaces (bathymetry)." Elevation data can be used as a representation of the terrain, such as a contour map, post elevations or a three-dimensional perspective. The data can also be used to build models to perform applications ranging from line-of-sight calculations, to transportation planning, and watershed management. Elevation data is often combined with other digital data themes for modeling and mapping applications.
There are many ways to represent elevation data sets and/or models. The standard product that the U.S. Geological Survey (USGS) produces and uses is represented as a digital elevation model (DEM) collected in 10- or 30-meter grid spacing with coverage in 7.5- x 7.5-minute blocks. Each coverage provides the same coverage as a standard USGS 7.5-minute quadrangle without overedge. Additionally seamless and multi-resolution digital elevation data sets are now becoming available through the USGS. The State of Indiana and the USGS are also cooperating in the creation of vector elevation data Digital Line Graph (DLG) at the 1:24,000 scale from the standard USGS 7.5 minute topographic maps (refer to Status Maps at the end of this section).

Data Sources:
Primary sources for DEMs are the USGS and the U.S. Department of Agriculture Forest Service (FS). Primary source for the DLGs is the USGS.

Status:
State coverage for 30-meter DEMs is 100%. Statewide coverage for the DLGs has been funded and is approximately 50% completed. Areas of Indiana north of 39 degrees 30 minutes of latitude are completed, nearly all of the rest of the state is under construction.

Standards:
Standards for DEMs are described in the USGS 'National Mapping Program Technical Instructions Standards for Digital Elevation Models,' dated January 1998.

Priority:
Currently undefined.

Total Current Investment in Theme:
Currently undefined.

Contributions by Sector:
Contributions have been from both the state and federal sectors.

Most Appropriate Data Steward:
The primary archive and distribution point for elevation data produced by the USGS is located at

the EROS Data Center (EDC) in Sioux Falls, South Dakota. The general public can order elevation data from this database.

<u>Maintenance Process and Cost:</u>
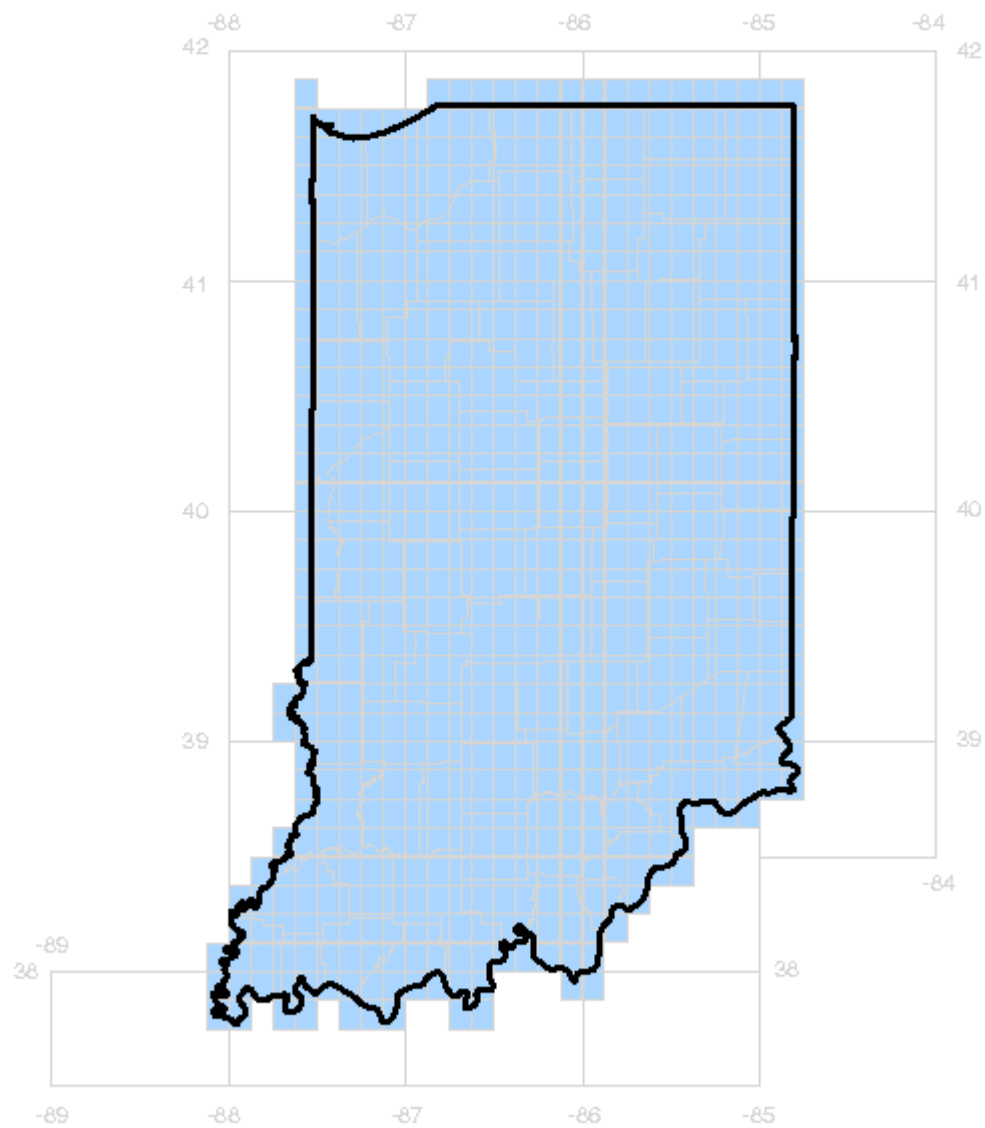Not known at this time.

Digital Elevation Model (DEM) Availability
7.5-Minute Series

Data current as of 7/30/2001

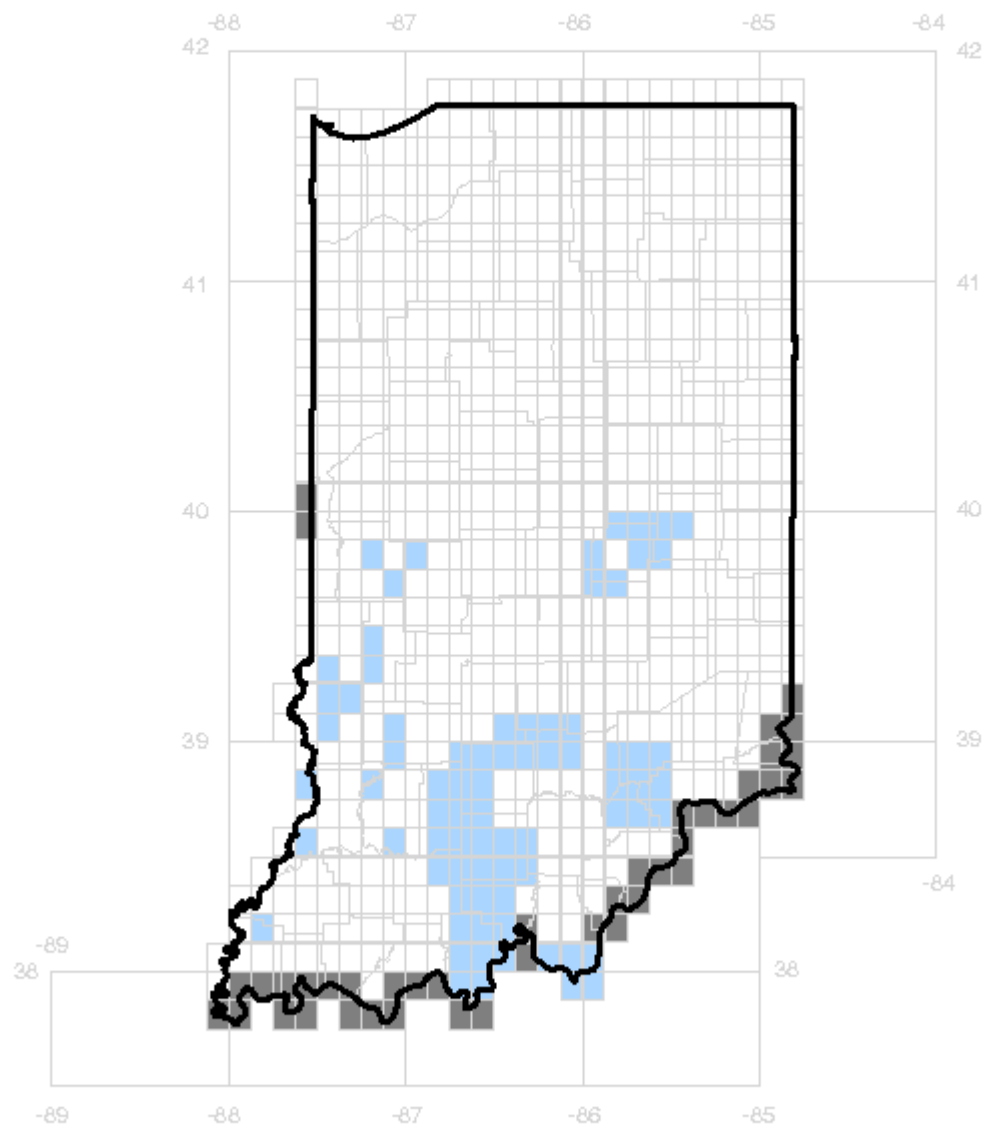☐ 30 METER DEM AVAILABLE FOR SALE
■ 30 METER DEM IN PROGRESS

Digital Elevation Model (DEM) Availability
7.5-Minute Series

Data current as of 7/30/2001

☐ 10 METER DEM AVAILABLE FOR SALE
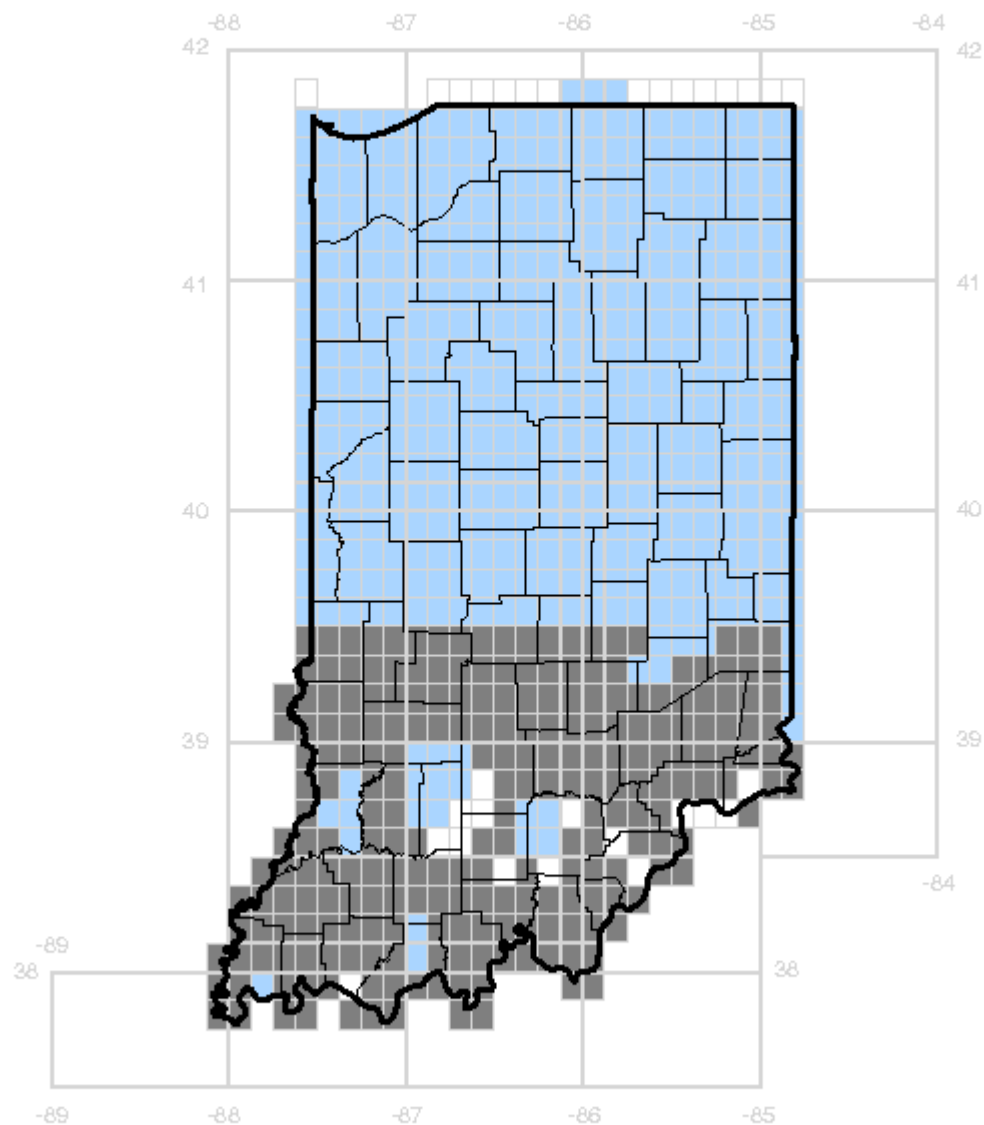■ 10 METER DEM IN PROGRESS

Digital Line Graph (DLG) Availability
7.5 Minute Hypsography (Contours) Overlay

Data current as of 7/31/2001

☐ HYPSOGRAPHY AVAILABLE FOR SALE
☐ HYPSOGRAPHY IN PROGRESS

Transportation

Theme Description:
The transportation layers often include many features of transportation networks and facilities. For the purposes of this initial plan, only roads and trails are included. For transportation issues related to growth, economic development, disaster preparedness, and emergency response, <u>all</u> roads must be included in the transportation framework.

Background and Purpose:
The transportation theme is used in Indiana for transportation planning and management, as a reference geography in mapping applications, for address matching and geo-coding in multiple applications, right-of ways, growth planning, public safety, and recreation.

General Status of Transportation Data and Data Sources:
There are multiple versions of roads data maintained in Indiana.

- Indiana Department of Transportation – Orthophoto-rectified federal, state, county, and local certified roads; scale = 1:12,000; status = statewide coverage in progress.
- USGS - Digital Line Graph (DLG); status = updating of legacy DLGs being done by Indiana Geological Survey (IGS); scale = 1:24000; status = incomplete (refer to status maps at the end of this section)
- Indiana Geological Survey; State and Federal Highways derived from DLGs and DRGs; scale = 1:24,000; status = statewide coverage in progress.
- Indiana Department of Natural Resources (IDNR) – Indiana Trails Inventory; scale = 1:24,000; status = complete with updates as needed
- U.S. Forest Service (USFS)– Roads and trails; developed under USFS INFRA system; scale = 1:24,000; status = 9 county Hoosier National Forest
- U.S. Census Bureau – Tiger 2000 Files; status = complete/address ranges/reference geography; scale 1:100,000
- Regional Planning Organizations – Development in progress dependant on region.
- Local government – Development in progress dependent on community resources. There are approximately 20 out of 92 counties in Indiana with some level of GIS development taking place.

Strategy:
- Indiana Department of Transportation general strategy to proceed from inventory, completion and finally maintenance has been through a process of converting a legacy database, which is near completion for system 1 roads. Updates are made after certification of roads by local entities. The data set includes three levels of road classification, system 1 - state and federal, system 2 - county roads, and system 3 - local, municipal and neighborhood.
- USGS (DLG)
- IGS – State and Federal highways derived from USGS DRGs at 1:24000.
- IDNR – Public recreational and alternative transportation trails managed by state,

federal, and local governments as well as non-government organizations. Most trails digitized from USGS 1:24,000 quad maps that were used for field mapping by the managing entities. Other trails were delineated using GPS technology.

- USFS – Trails and roads mapped with GPS and information used to update national INFRA database.
- US Census Bureau- TIGER
- Regional Planning Organizations - Use public domain data as base layers for creating regional small scale layers utilizing right-of-way information from state DOT, DOQQs, and traffic counts to determine growth areas.
- Local government strategies are typically street centerline and/or edge of pavement digitized from ortho-photography and/or plat update. Local updates are submitted to the state DOT for certification

Standards and Approach to Standards Implementation:
The Indiana Geographic Information Council (IGIC) is a state-wide effort by GIS professionals dedicated to fostering collaborative GIS development through out the state. Part of this collaborative effort is the development, adoption and implementation of standards for GIS data. The standard that has been developed and adopted by IGIC and many participants is the *Indiana Metadata Profile*, which is minimally compliant with the FGDC standard for metadata. All Indiana GIS professionals are encouraged to develop fully compliant FGDC metadata, using the *Indiana Profile* as a starting point.

Priorities:
Priorities are established by each of the organizations developing GIS data for their purposes. These priorities may take into account the data needs of other organizations.

Data Requirements and Stakeholders:
The stakeholders for accurate, well maintained transportation spatial data are those organizations and individuals working with GIS at all levels. From the maintenance and upgrading of federal and state highways by DOT and local government, to trail upkeep and development by DNR, USFS, and non-government organizations, all have need of accurate, up to date spatial data. IGIC is addressing these needs by encouraging communication and cooperation between GIS professions on all levels through out the state.
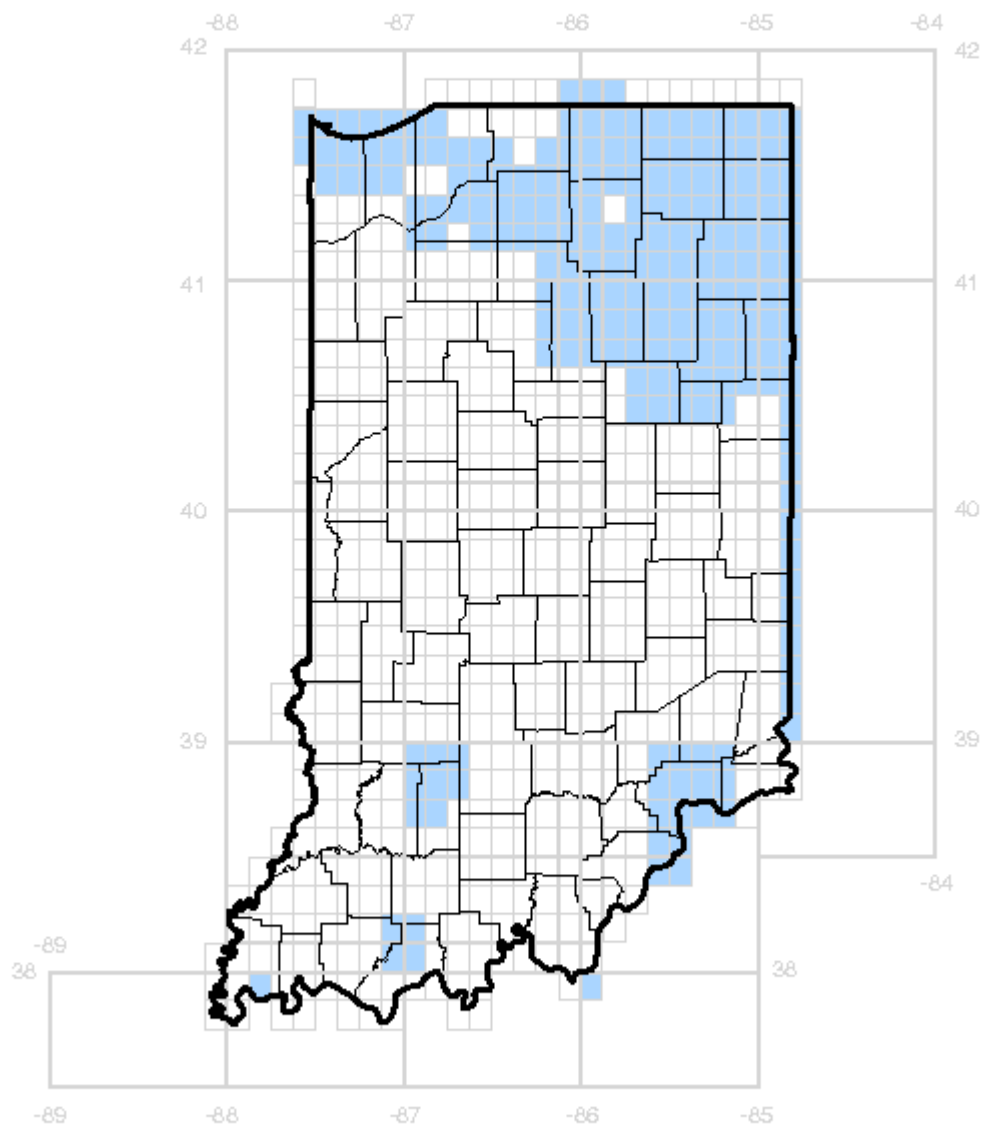
Digital Line Graph (DLG) Availability
7.5 Minute Transportation Overlay

Data current as of 7/31/2001

☐ TRANSPORTATION AVAILABLE FOR SALE
◼ TRANSPORTATION IN PROGRESS

Hydrography

Theme Description:
The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that comprise the nations surface water drainage system. It is based initially on the content of the U.S. Geological Survey 1:100,000-scale Digital Line Graph (DLG) hydrography data, integrated with reach-related information from the U.S. Environmental Protection Agency Reach File Version 3.0 (RF3).

More specifically, it contains reach codes for networked features and isolated lakes, flow direction, names, stream level, and centerline representations for areal water bodies. Reaches are also defined to represent waterbodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria set out by the Federal Geographic Data Committee.

Background and Purpose:
The National Hydrography Dataset combines elements of the DLG and RF3: spatial accuracy and comprehensiveness from the DLG and network relationships, names, stream level, and a unique identifier (reach code) for surface water features from RF3. The NHD supersedes DLG and RF3 by incorporating them, not by replacing them. Users of DLG and RF3 will find the National Hydrography Dataset both familiar and greatly expanded and refined. The NHD provides a national framework for assigning reach addresses to water-related entities, such as industrial dischargers, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network in a manner similar to street addresses. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities and any associated information about them can be analyzed using software tools ranging from spreadsheets to geographic information systems (GIS). GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help better understand and display their respective effects upon one another.

Furthermore, because the NHD provides a nationally consistent framework for addressing and analysis, water-related information linked to reach addresses by one organization (national, state, local) can be shared with other organizations and easily integrated into many different types of applications to the benefit of all. The National Hydrography Dataset is designed to provide comprehensive coverage of hydrologic data for the U.S. While initially based on 1:100,000-scale data, the NHD is designed to incorporate - and encourage the development of - higher-resolution data required by many users. It will facilitate the improved integration of water-related data in support of the application requirements of a growing national user community and will enable shared maintenance and enhancement.

General Status of Data and Data Sources:
NHD at the 1:100,000 scale is complete statewide for Indiana. Joint efforts through the federal and state agencies on a project-by-project basis are working together to complete a higher

resolution dataset of 1:24,000 (refer to status maps at the end of this section). Currently, funding and implementation plans for comprehensive statewide coverage at 1:24,000 are not in place. Estimates to complete a statewide high-resolution NHD coverage will cost a total of $510,000, with the state's share being $255,000 (50-50 actual costs with USGS). This estimate is figured over an approximate two-year timeframe.

The completeness of the data reflects the content of the sources, which, in the initial release of the National Hydrography Dataset, most often are U.S. Geological Survey topographic maps. Features found on the ground may have been eliminated or generalized on the source graphic because of scale and legibility constraints. In general, streams longer than one mile (approximately 1.6 kilometers) were collected. Most streams that flow from a lake were collected regardless of their length. Only definite channels were collected so not all swamp/marsh features have stream/rivers delineated through them. Lake/ponds having an area greater than 6 acres (approximately 2.4 hectares) were collected. Note, however, that these general rules were applied unevenly among maps during compilation. Some map quadrangles have a much sparser pattern of hydrography than do adjoining maps and these differences continue in the digital rendition of these features. A priority for maintenance of the National Hydrography Dataset is the rectification of these differences. Transport reaches are defined on nearly all features of type stream/river, canal/ditch, artificial path, and connector. Waterbody reaches are defined on the subset of lake/pond features that were identified as waterbodies during the development of Reach File Version 3. Most attention in applying geographic names was given to transport reaches that follow stream/rivers and waterbody reaches. Detailed capture conditions are provided for every feature type in the Standards for National Hydrography Dataset (USGS, 1999), available online through <http://mapping.usgs.gov/standards/.>

Strategy:
The USGS DLG and the EPA Reach files were originally created at 1:100,000 scale. The two datasets where combined and the new product is the NHD. The USGS goal is to get a high-resolution coverage at a scale of 1:24,000 by working with other partners. The Department of Natural Resources and the Hoosier State Forest are working with USGS to create some higher resolution maps.

List of Organizational/Individual Hydrography Contacts:
Federal Contacts
USGS   (Charlie Hickman)
US Forest Service
State Government Contacts
Department of Natural Resources   (Bob Wilkinson)
Department of Environmental Management
Indiana Society of Professional Land Surveyors
Universities
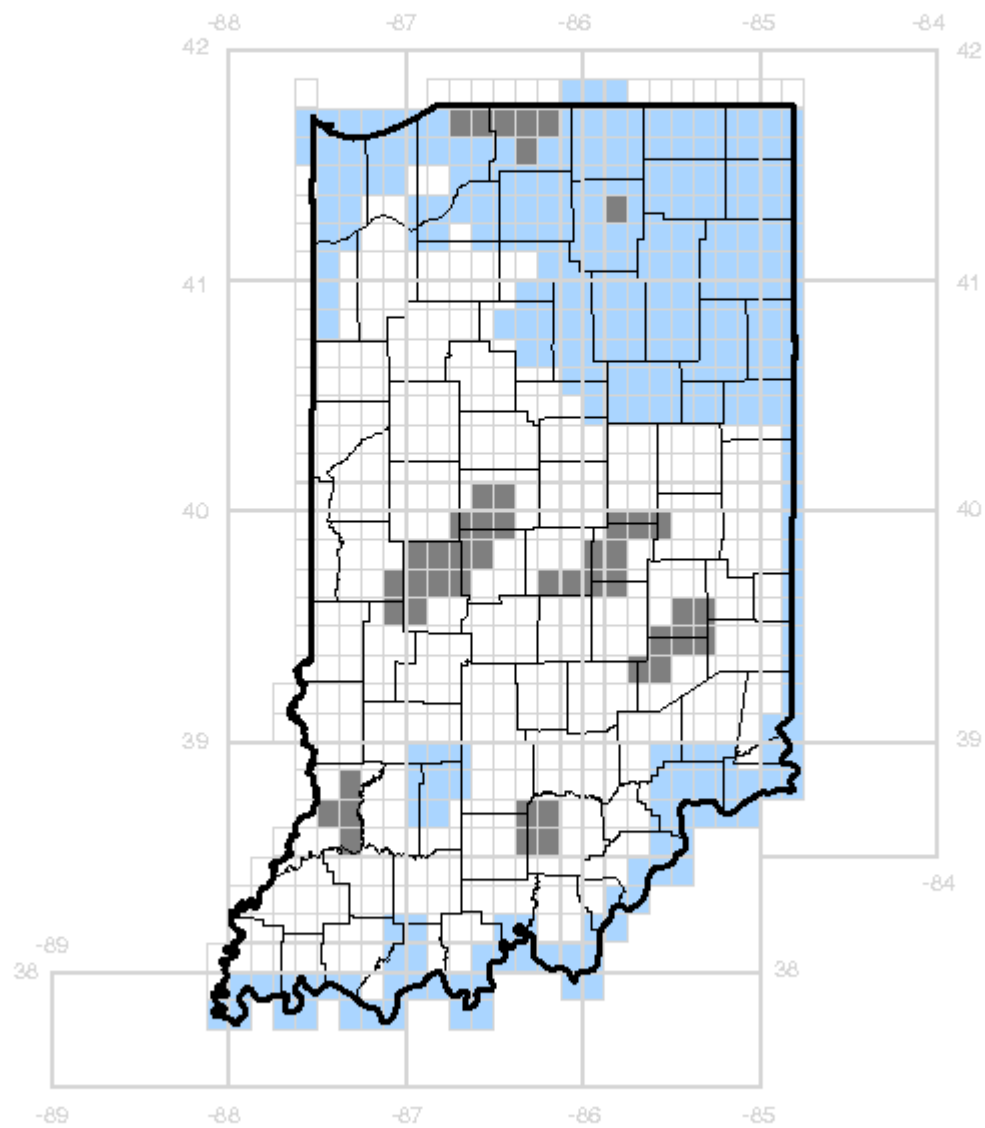Purdue   (Bernie Engel)

INDIANA

Digital Line Graph (DLG) Availability
7.5 Minute Hydrography Overlay

Data current as of 7/31/2001

☐ HYDROGRAPHY AVAILABLE FOR SALE
☐ HYDROGRAPHY IN PROGRESS

Boundaries / Governmental Units

Theme Description:
Boundaries / Governmental Units are maintained in a series of layers representing the geographic extent of areas that define jurisdiction, taxation units or administrative management responsibilities. These governmental units include state, counties, incorporated places, legal civil divisions, and American Indiana reservations.

General Status of Data and Data Sources:
There are multiple sources for boundary related data in Indiana. A sub-committee on boundaries of the IGIC Data Sharing Committee should identify the needs and directions for this theme. A disparate group of local, state and federal agencies collect and store various boundary information for Indiana. Many of these data are currently incompatible in both a technical and a logistical sense. Issues such as who collects the data, how often, and who should store the data still must be resolved. In an effort to identify relevant boundaries, the accompanying table identifies currently known boundary types critical to any organization that functions or has interests in the state of Indiana.

Statewide Boundaries / Governmental Units currently available include State, County, Municipal and Administrative Townships primarily derived from the US Census Tiger/Line files. Public Land Survey System (PLSS) Township, Range, and Section data at a scale of 24,000 is currently being developed by the Indiana Geological Survey.

Theme	Source	Scale	Status
Corporate Boundaries	Indiana Department of Transportation		In progress
Non-Corporate Boundaries	Indiana Department of Transportation		In progress
Counties	US Census		
Township Boundaries – Polygons (PLSS)	Indiana Geological Survey	1:24,000	In progress
Township Boundaries – Lines (PLSS)	Indiana Geological Survey	1:24,000	In progress
Zip Codes			
USGS Quadrangle Boundaries	Indiana Geological Survey	1:24,000	In progress
Census Block Group Boundaries	Indiana Geological Survey	1:	In progress
Census County Boundaries	Indiana Geological Survey	1:50,000	In progress
Census Tract Boundaries	Indiana Geological Survey	1:35,000	In progress
City Areas	Indiana Geological Survey	1:100,000	In progress
County Boundaries - Polygons	Indiana Geological Survey	1:24,000	In progress
County Boundaries - Lines	Indiana Geological Survey	1:24,000	In progress
Indiana County Borders	IDNR	1:250,000	Land Use Land Cover associated files
Indiana House Districts	IDNR	1:100,000	1990 Census
Indiana Senate Districts	IDNR	1:100,000	1990 Census
Indiana State Border	IDNR	1:100,000/1:250:000	1990 Census

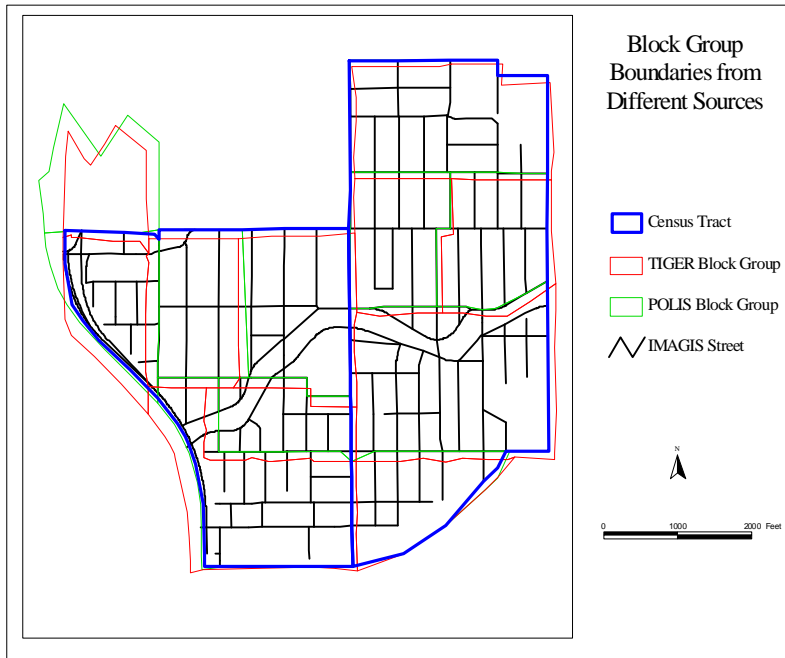| US Congressional Districts	IDNR	1:100,000	1990 Census
US Congressional Districts	Legislative Services Agency	1:100,000	2000 Census
Legislative Districts	Legislative Services Agency	1:100,000	1990 Census
Voting Precincts	Legislative Services Agency	1:100,000	1990 Census
?	State Board of Tax Commissioners		

Strategy:

The strategy for development of Boundaries / Governmental Units data for the state of Indiana includes the development of recommendations for state, county, and local governments to use in the development of GIS data. These recommendations will aid in the establishment of consistent data usable internally and externally to the agency creating and maintaining the data. The use of standardized metadata formats provides the documentation necessary for data sharing. The Indiana Geographic Information Catalog (Metadata clearinghouse) and the development of the data clearinghouse will build the infrastructure for the widespread use of the data created by the governmental units.

Standards and Approach to Standards Implementation:

The Indiana Geographic Information Council (IGIC) has adopted recommendations for Metadata and is currently in review for recommendations for Map Scale and Accuracy, Projection, Datum, and Coordinate System standards. A committee is developing a draft recommendation for feature level metadata.

Priorities:

Redundant and inconsistent boundary data layers are often used to register new data sources. The resulting overlying data sources are not aligned, making data integration and GIS analysis impractical (Figure). To ensure compatibility of data and data integration, the boundary theme is of high priority.

Block Group
Boundaries from
Different Sources

Census Tract
TIGER Block Group
POLIS Block Group
IMAGIS Street

0   1000   2000 Feet

Data Requirements and Stakeholders:
Undetermined at this time.

Detailed Project Plans:
Undetermined at this time.

Inventory and evaluation of existing data sets:
Undetermined at this time.

Requirements to Complete Collection:
Undetermined at this time.

Integration and Reconciliation of Data:
Undetermined at this time.

Estimate of the Total Investment in This Theme to Date:
Undetermined at this time.

Digital Line Graph (DLG) Availability
7.5 Minute Boundary Overlay

Data current as of 7/31/2001

☐ BOUNDARIES AVAILABLE FOR SALE
◼ BOUNDARIES IN PROGRESS